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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,131	03/30/2005	Robert W. Downing	130912.90829	1572
26710 7590 01/23/2007 QUARLES & BRADY LLP 411 E. WISCONSIN AVENUE SUITE 2040 MILWAUKEE, WI 53202-4497			EXAMINER LEVI, DAMEON E	
			ART UNIT 2841	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 01/23/2007	DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/502,131	Applicant(s) DOWNING ET AL.	
	Examiner Dameon E. Levi	Art Unit 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/30/05</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Siahpolo et al US Patent 6975519.**

Regarding claim 1, Siahpolo et al discloses an apparatus comprising:  
a latching mechanism(element 41, Figs 1-15) adjacent a rear edge of the module; and  
an actuator(element 62, Figs 1-15) adjacent a front edge of the module,  
wherein operation of the actuator in one direction moves a component  
of the latching mechanism in a first translational and rotational movement  
resulting in insertion of the module, and operation of the actuator in the other  
direction moves the component of the latching mechanism in a second

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translational and rotational movement resulting in extraction of the module(element 62, 41, Figs 6-8).

Regarding claim 2, Siahpolo et al discloses an assembly comprising:

a first arm(element 50, Figs 1-15) that is positioned proximate a first edge of the plug-in module and that includes a first guiding surface(element 40, Figs 1-15);

an actuation device (element 41, Figs 1-15) coupled to the plug-in module and capable of being actuated proximate a second edge of the plug-in module; and

a second guiding surface (element 76, Figs 1-15) on the plug-in module capable of interfacing with the first guiding surface;

wherein the actuation device causes the first arm to be translated inward with respect to the plug-in module when actuated in a first manner and causes the first arm to be translated outward when actuated in a second manner(element 41,50 Figs 1-15),

wherein, as the first arm is moved inward, the first and second guiding surfaces interact so as to provide additional movement of the first arm and thereby engage a retaining component on the rack component(element 41,32, Figs 1-15).

Regarding claim 3, Siahpolo et al discloses wherein the actuation device includes:

a first rotating component coupled to the plug-in module by a first pin(element 60, Figs 1-15), wherein the first rotating component is pivotable about the first pin; and a second pin (element 56, Figs 1-15)positioned on the first rotating component a first distance from the first pin so that, as the first rotating component rotates about the first pin, the second pin moves in an arcuate manner that includes a first motion component that is substantially parallel to the first axis; and wherein the first arm includes a first

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orifice(element 64, Figs 1-15) capable of receiving the second pin so that, as the rotating component is rotated in a first direction, the second pin forces the first arm inward toward the plug-in module.

Regarding claim 4, Siahpolo et al discloses wherein the first rotating component is a drag link component(element 64, Figs 1-15) that includes a lever portion extending radially-outward away from the first pin, and wherein the actuation device further includes a push-pull rod(element 43, Figs 1-15) extending from proximate the second edge to an outer end of the lever portion, to which the push-pull rod is hingedly coupled.

Regarding claim 5, Siahpolo et al discloses wherein the push-pull rod(element 43, Figs 1-15) extends substantially parallel to the first axis and wherein, as the push-pull rod is pushed inward toward the first edge, the second pin (element 56, Figs 1-15) on the drag link component is rotated and consequently the first arm is forced inward toward the plug-in module and additionally is rotated to hook onto the retaining component.

Regarding claim 6, Siahpolo et al discloses wherein the lever portion includes a slot(element 64, Figs 1-15) and the push-pull rod includes an additional pin (element 60, Figs 1-15) that is positioned within the slot.

Regarding claim 7, Siahpolo et al discloses a second arm(element 50, Figs 1-15) that is positioned proximate the first edge of the plug-in module and that includes a third guiding surface(element 140, Figs 1-15);

a fourth guiding surface(element 46, Figs 1-15) on the plug-in module capable of interfacing with the third guiding surface; and a second drag link component(element

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64, Figs 1-15) rotatably coupled to the plug-in module by a third pin and coupled additionally to the second arm by a fourth pin(element 35, Figs 1-15), wherein each of the first and second drag link components includes a respective eccentric portion, and wherein the respective eccentric portions of the first and second drag link components are linked to one another by a connector so that, when the first drag link component is rotated, the second drag link component also is rotated, which in turn causes movement of the second arm(Fig 7).

Regarding claim 8, Siahpolo et al discloses wherein the retaining component is an alignment pin(element 35, Figs 1-15) protruding from the backplane and having a notch(element 59, Figs 1-15) to receive a protrusion of the first arm.

Regarding claim 9, Siahpolo et al discloses wherein the system is further for extracting the plug-in module from the rack component, wherein, when the first arm is forced outward away from the plug-in module, pressure is applied by the first arm to the rack component, so that the rack component is forced away from the plug-in component(see Figs 7, 8).

Regarding claim 10, Siahpolo et al discloses wherein the lever portion (element 50, Figs 1-15) creates a mechanical advantage in moving the first arm(element 41, Figs 1-15), and wherein the first guiding surface has a first portion that is substantially flat and a second portion that is substantially concave.

Regarding claim 11, Siahpolo et al discloses wherein the actuation device includes a second arm(element 43, Figs 1-15) coupled to the plug-in module by a first pin(element 60, Figs 1-15), wherein the second arm is pivotable about the first pin,

wherein the second arm extends a majority of a first distance from the first edge of the plug-in module to the second edge of the plug-in module; wherein the actuation device further includes a second pin(element 56, Figs 1-15) positioned a second distance from the first pin, wherein the second pin is mechanically coupled to the second arm so that, as the second arm rotates about the first pin, the second pin moves in an arcuate manner that includes a first motion component that is substantially parallel to the first axis; and wherein the first arm includes a first orifice capable of receiving the second pin, so that the first arm rotates about the second pin as the second arm is rotated.

Regarding claim 12, Siahpolo et al discloses further comprising a drag link arm(element 34, Figs 1-15) having first and second ends, wherein the first pin(element 142, Figs 1-15) extends through a first end of the drag link arm, wherein the drag link arm is rotationally coupled to the second arm so that, as the second arm rotates about the first pin, the drag link arm also rotates about the first pin, and wherein the second pin is supported at the second end of the drag link arm.

Regarding claim 13, Siahpolo et al discloses wherein the first orifice is an oblong orifice(element 58, Figs 1-15) having a longer axis that is substantially perpendicular to the first axis.

Regarding claim 14, Siahpolo et al discloses wherein the retaining component is a third pin (element 32, Figs 1-15) supported by at least one additional arm with respect to the remainder of the rack component, and wherein the third pin is substantially perpendicular to the first axis.

Regarding claim 15, Siahpolo et al discloses wherein the first arm includes a protrusion(element 141,Figs 1-15) that engages the third pin(element 32,Figs 1-15) when the first arm is forced to move translationally inward and to rotate upward.

Regarding claim 16, Siahpolo et al discloses wherein the first guiding surface has a first portion that is substantially fiat(element 232,Figs 1-15) and a second portion that is substantially concave(element 132,Figs 1-15), wherein the second portion interfaces with the second guiding surface before the first arm has been forced inward, and wherein the first portion interfaces with the second guiding surface as the first arm is forced inward, thereby causing the first arm to rotate towards the retaining component and engage the retaining component.

Regarding claim 17, Siahpolo et al discloses wherein the system is further for extracting the plug-in module from the rack component, wherein, when the first arm is forced outward away from the plug-in module, pressure is applied by the first arm to the rack component, so that the rack component is forced away from the plug-in component( see Figs 6-8).

Regarding claim 18, Siahpolo et al discloses wherein the second arm acts as a lever arm and creates a mechanical advantage in moving the first arm( see Figs 6-8).

#### ***Additional Comments***

Regarding recitations throughout the claims wherein an element is "capable of" performing a function, it has been held that such recitations are not positive limitations



but only require the ability to so perform. In this case, the prior art of record is deemed as at least possessing such ability.

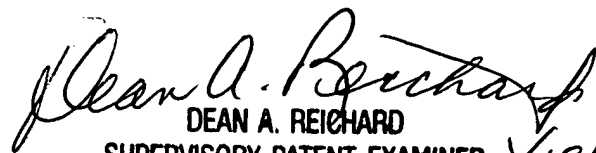
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E. Levi whose telephone number is (571) 272-2105. The examiner can normally be reached on Mon.-Thurs. (9:00 - 5:00) IFP, Fridays Telework.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 2841

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1/19/07